Army Corps of Engineers

Dredging of Oregon Inlet, Manteo (Shallowbag) Bay, Dare County NC - $20 million

Army Corps of Engineers – Wilmington District

69 Darlington Avenue

Wilmington, NC 28403

Oregon Inlet is a dynamic body of water flowing between the Northern Outer Banks and Hatteras Island. It is the northernmost inlet in North Carolina and is important for the Outer Banks' recreational industries, including boating and fishing, and also to commercial interests. Oregon Inlet also acts as a "flushing" mechanism for the Albemarle, Currituck, Croatan, Roanoke, and Pamlico Sound systems - proper water flow through the inlet allows the sounds to flush pollutants into the ocean. Annual dredging has been used to maintain the navigability of Oregon inlet, but the current depth is not adequate for safe passage of many vessels. In May 2003, the Council on Environmental Quality, the National Oceanic and Atmospheric Administration, and the Army Corps agreed that a 400-ft widener would be the most cost-effective way to improve navigability and safety of the inlet, but the previous Administration never requested the funding necessary to complete the widener. This level of federal funding would complete the annual dredging necessary to maintain the depth of the interior channel, and would dredge the 400-foot widener for advance maintenance.

Federal funding would ensure continued commercial viability of sea trade routes passing through Oregon Inlet, as well as protect important commercial fishing waters. It would provide an important boost to the economy and protect trade and fishing jobs.

Department of Energy

LEED Certification for the North Carolina Department of Environment and Natural Resources Green Square Complex - $1 million

North Carolina Department of Environment and Natural Resources (NC DENR)

1601 Mail Service Center

Raleigh, NC 27699-1601

The State of North Carolina is seeking federal funding to support its two-block, multi-use sustainable development initiative in downtown Raleigh. The "Green Square Complex" will include NC DENR's offices as well as the NC Museum of Natural Sciences Nature Research Center and will provide experiential learning opportunities focused on current scientific research and environmental issues affecting the daily lives of North Carolinians. Federal funds would be used to help design buildings that meet the U.S. Green Building Council's nationally recognized Leadership in Energy and Environmental Design (LEED) green building rating system.

According to the Energy Information Administration, residential and commercial buildings account for the largest share of the nation's energy consumption. There are numerous technologies available that can improve the energy efficiency of buildings, thereby reducing consumption and lowering long-term energy costs. Federal investments in sustainability and energy-efficiency are essential in helping our nation move toward energy independence.

Solar Energy Research Center Instrumentation Facility, UNC-CH - $1 million

University of North Carolina at Chapel Hill – Solar Energy Research Center

424 Nottingham Drive

Chapel Hill, NC 27517

The mission of UNC-SERC is to develop materials and methods needed to fabricate the next generation of solar energy devices. The Center is seeking federal funding to purchase and install a solar energy research instrumentation laboratory at the Center to help overcome the scientific and engineering challenges associated with solar energy conversion and the mass production of commercially-viable devices.

Developing renewable carbon-neutral energy sources is a significant challenge for the scientific community. On one hand, it involves some of the most fundamental questions in chemistry, physics, and material science. On the other hand, it poses significant challenges to engineers attempting to translate the discoveries made in the research lab into functioning, robust devices that can be mass-produced on a large scale. Finding solutions will require the synthesis of new molecular catalysts, the design of novel materials and nanoscale architectures, the development of new methods for working with non-traditional materials, and the ability to assemble them cheaply into efficient solar devices.

Federal investments in renewable energy sources are essential in helping our nation move to toward energy independence, and they hold the potential to create a new generation of jobs and address global climate change.

Center for Integrated Biomass Refining, North Carolina State University - $1 million

North Carolina State University

Raleigh, NC 27695

The Center for Integrated Biomass Refining (CIBR) at NCSU is working to advance the conversion of sustainable biomass resources to usable power. The Center allows researchers to establish new collaborations and utilize research and development infrastructure to educate the workers needed to support a fledgling industry of vital national importance, and to provide effective and efficient technology transfer to the new biorefinery industry. North Carolina State University is seeking federal funding for research into biomass refinery methods, a critical step in bringing the technology to a scale where these energy solutions can be fully utilized.

Federal investments in renewable energy sources are essential in helping our nation move toward energy independence, and in North Carolina, this is critical to meeting the state's renewable portfolio standard. Woody biomass has significant and currently untapped potential for energy conversion, and development of biomass refinery capacity could lead to "green" job growth.

LED Lighting Technology, City of Raleigh, NC - $500,000

City of Raleigh

PO Box 590

Raleigh, NC 27602

Light-emitting diode (LED) lighting is an emerging lighting technology that uses a fraction of the energy of conventional incandescent bulbs. The City of Raleigh has requested federal funding to further deploy LED lights in municipally owned facilities and put Raleigh on track to be the first "LED City."

Federal investments in energy efficient technology are essential in helping our nation move toward energy independence. LED lighting is energy efficient and has a number of environmental benefits over other light sources. LED bulbs do not contain mercury, last 20 years, and can be recycled at the end of their usable life.

Solar Powered Long-Distance Circulation for Jordan Lake - $700,000

Triangle J Council of Governments

4307 Emperor Boulevard, Suite 110

Durham, NC 27703

Although algae are vitally important to marine and fresh-water ecosystems, certain kinds of algal growth can be toxic to humans and animals. Algal blooms can force the closure of recreational lakes and can be particularly problematic when they grow in lakes that provide drinking water. When drinking water is contaminated with algae, utilities must seek alternative sources or implement extensive supplemental water processing methods. Triangle J Council of Governments is seeking federal funding to address this potential problem in Jordan Lake by purchasing solar-powered water circulators that will inhibit the growth of harmful algae. By addressing harmful algal growth in Jordan Lake, federal funding will ensure the safety of the drinking water supply for Triangle area residents and the availability of Jordan Lake as a recreational resource.

Consortium for Plant Biotechnology Research - $6 million

Consortium for Plant Biotechnology Research, Inc

P.O. Box 20643

St. Simons Island, GA 31522

The Consortium supports biotechnology, renewable energy, and environmental research that can translate into market-ready products, new energy technologies, and other practical applications. It promotes the rapid development and transfer of these technologies from academic research laboratories to the marketplace, creating new renewable energy industries, jobs, and other economic opportunities. It advances technological, commercially valuable innovations based on new understandings and uses of plants and other organisms; provides multidisciplinary training and research opportunities for a new generation of scientists and engineers; and connects industry needs with university and industry suppliers.

The proposed project is a critical engine for creating new jobs in the agricultural and renewable energy industries, particularly in high-tech biotechnology areas such as the Triangle. Research facilitated by the Consortium will lead to development of new renewable energy sources that will reduce oil and gas consumption, greenhouse gas emissions, and dependence on foreign oil suppliers. Significant work within this project will be carried out at North Carolina State University.

Fiscal Year 2010 Project Requests: Energy and Water Development